PATENT COOPERATION TREATY

PCT 10/5 106

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PD020106	**FOR FURTHER ACTION**	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/EP 03/12261	International filing date *(day/month/year)* 03.11.2003	Priority date *(day/month/year)* 15.11.2002
International Patent Classification (IPC) or both national classification and IPC H04N5/445		
Applicant THOMSON LICENSING S.A. et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

    ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

    These annexes consist of a total of 3 sheets.

3. This report contains indications relating to the following items:

    I   ☒ Basis of the opinion

    II   ☐ Priority

    III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

    IV   ☐ Lack of unity of invention

    V   ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

    VI   ☐ Certain documents cited

    VII ☐ Certain defects in the international application

    VIII ☐ Certain observations on the international application

Date of submission of the demand 17.05.2004	Date of completion of this report 04.11.2004
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer de Dieuleveult, A Telephone No. +49 89 2399-8946

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.   PCT/EP 03/12261

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*:

Description, Pages

1-10   as originally filed

Claims, Numbers

1-9   received on 23.10.2004 with letter of 22.10.2004

Drawings, Sheets

1/9-9/9   as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

   These elements were available or furnished to this Authority in the following language: , which is:

   ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).

   ☐ the language of publication of the international application (under Rule 48.3(b)).

   ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

   ☐ contained in the international application in written form.

   ☐ filed together with the international application in computer readable form.

   ☐ furnished subsequently to this Authority in written form.

   ☐ furnished subsequently to this Authority in computer readable form.

   ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

   ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

   ☐ the description,   pages:

   ☐ the claims,   Nos.:

   ☐ the drawings,   sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have
been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this
report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes:	Claims	1-9
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-9
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-9
	No:	Claims	

2. Citations and explanations

   see separate sheet

V.   Reasoned statement

1.   Reference is made to the following document:
D1:   US 2002/063681 A1 (CHEN MILTON ET AL) 30 May 2002

2.   Claim 1:
D1 discloses a method for composition of subtitles for audio/video presentations
(see "picture layer, layer for oral voice, first and second instrument" in paragraph
[0017]), wherein data streams containing video, audio and subtitle information are
transferred from a storage medium (see "database"), comprising the step of
retrieving from said storage medium subtitle layer data, the subtitle layer data
containing graphic subtitle elements (see "subtitle layer" in par. [0022]).

The claimed subject-matter thus differs from the disclosure of D1 in that the
claimed method further comprises the steps of extracting from said retrieved
subtitle layer data cropping information, and of enabling automatic cropping of
parts of the subtitle elements to be displayed, wherein the cropped parts are
defined by said cropping information.
D1 does not appear to offer any alternative to the displaying of the whole subtitle
information (see Fig. 4A-4E).
Even if D1 mentions the possibility for the user to modify the size and position of
an image object 256 (see par. [0027]), and although it is well known from
numerous editing software (e.g. Microsoft Works' PictureIt!) to allow a cropping
function on such an image layer as well, some manual input from a user is still
required in the prior art whereas, in the present application, the cropping
information is directly extracted from the subtitle layer data that has been pre-
recorded in the storage medium.

The subject-matter of claim 1 is therefore considered to satisfy the conditions set
out in Article 33 PCT.

3.   Claims 5 and 9:
The same reasoning applies to these independent claims directed to the
corresponding apparatus (claim 5) and optical storage medium (claim 9).

4.   Claim 7:
The particular arrangement for the composition of subtitles as claimed herein is
neither disclosed nor fairly suggested by the cited documents.

5.   Claims 2-4, 6 and 8:
      These claims are dependent claims and thus fulfill the requirements of the PCT as
      well.

6.   Corrections should be made:
      - in Fig. 5: "SVCA" should read "SCVA";
      - in Fig. 8: the bidirectional arrow should link "AVSGL" with "SL" (see p. 8, ll. 27-
      30).

Claims

1. Method for composition of subtitles for audio/video presentations, wherein subtitle information is separate from audio/video material, and subtitle information is transferred from a network or a storage medium, such as a disc, **characterized in**

   - using one or more subtitle layers; and

   - cropping parts of the subtitles of a layer or layers before displaying them, so that only a selected (RHC,RVC,RCH,RCW) part of the transferred subtitles is displayed at a time.

2. Method according to claim 1, wherein the colors of a specified (SCHA,SCVA,SCH,SCW) part of the subtitles may be modified.

3. Method according to claim 1 or 2, wherein subtitles may be interactively moved, cropped or highlighted, or the colors of subtitles be interactively modified by a user.

4. Method according to any of the previous claims, wherein the subtitles may contain graphics.

5. Method according to any of the previous claims, wherein the AV material and the subtitles comply with the DVB-ST standard.

6. Apparatus for composition of subtitles, the apparatus mixing and switching video and graphics data, the data being read from a storage medium or received from a network and comprising still picture data or MPEG video data, data for at least two layers of subtitles or animations, and optionally data for non-synchronized graphics, the apparatus comprising

   - a mixer (MX) that may superimpose video data of a

back layer, at least two middle layers and a front layer;

- a mixer and scaler (MXS) that may superimpose video data of a back layer, a middle layer and a front layer, the mixer and scaler (MXS) providing its output data to the mixer (MX);

- a video decoder (MVDec) and/or a still picture decoder (SPDec), wherein the output data of either the video decoder or the still picture decoder may be switched (s1) to the mixer and scaler (MXS);

- at least two simultaneously working decoders (AVSGDec1,AVSGDec2) for synchronized graphics or subtitles, wherein the output of each of the decoders may be switched (s2,s3) to either the mixer (MX) or the mixer and scaler (MXS), and wherein a decoder (AVSGDec1,AVSGDec2) may select a part (RHC,RVC,RCH,RCW) of its input data to be output for display;

- a renderer for the non-synchronized graphics, providing data to the mixer (MX).

7. Apparatus according to claim 6, wherein a decoder (AVSGDec1,AVSGDec2) may apply a different color-look-up table to a specified (SCHA,SCVA,SCH,SCW) part of a subtitle layer.

8. Apparatus according to claim 6 or 7, comprising a subtitle decoder (ST-DEC) that is capable of superseding default subtitle parameters (DD) with other subtitle parameters (SD) generated upon user action, for interactively modifying or highlighting subtitles.

9. Apparatus according to any of claims 6-8, wherein the data comply with the DVB-ST standard.